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ABSTRACT

Research suggests that students at all grade levels perform better in school when parents support teachers and become involved in the school's functioning. Surveys indicate that many parents want to help their children but do not know how. Offered are activities that can be shared with parents of elementary children. Suggestions for an activity file for reading, mathematics, and language arts are included. An insert on making and flying paper airplanes that highlights the forces that affect flight is provided and can be reproduced for student use. Brochures offering suggestions to parents for helping their children in school are also listed. (ML)

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R & D INTERPRETATION SERVICE BULLETIN
SCIENCE

Parent Support and Involvement

Jean Sealey

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QUESTION: *Should I try to get parents involved in their children's school work? What can I do to foster parent support of school related activities?*

The home environment is one of the most important factors in a student's achievement at school (3). Researchers have found correlations between family size, socioeconomic level, and parent educational level and achievement. These variables, however, are not subject to the school's control or influence. One variable related to achievement over which the school can exert direct influence is parents' support and involvement.

PARENT SUPPORT AND INVOLVEMENT

RESEARCH HAS SHOWN that parent attitudes toward school have a definite impact on student achievement at all grade levels. Parents communicate important values about school and learning. Students whose parents have positive attitudes about school are shown to have higher academic achievement, social adjustment, and emotional stability (3). We know from research studies that there are specific things parents can do at home to show their support of teachers and the school. They can, for example (4):

1. Monitor students' work habits.
2. Allocate study or reading time.
3. Give a higher priority to school work than to television.
4. Discuss news, current events, and television programs with children. Take children to the library, museums, and cultural events.

Surveys indicate that parents want to support the school's programs and policies. Many times, however, they don't know how. It is up to teachers and school administrators to give parents guidance. Perhaps one of the most useful steps you can take is to make sure parents know your school's policies on attendance, conduct, and academic performance standards. Then enlist their support in helping to enforce these policies. One of the greatest allies you can have is a supportive parent.

How can you help parents, particularly parents of elementary level students, show their support? You can discuss with parents the suggestions listed above. You can also go a step further: you can

OVERVIEW

Research tells us that students at all grade levels perform better in school when parents support teachers and become involved in the school's functioning. Surveys show that many parents who want to help their children don't know how. They need and want teachers' guidance. We offer activities that you can share with parents of elementary children. The activities and suggestions contained here are general in nature; their use is not limited to science students. Our insert, however, is science specific. An in-depth review of the relevant research literature on parent involvement, including benefits and specific examples, is available in AEL's Occasional Paper *Parent Involvement: A Review of the Literature* (3). Much of the information contained in this bulletin is based on research cited in the review. In addition, a chapter on home factors that affect learning can be found in *Research Within Reach: Science Education*, developed by the Research and Development Interpretation Service (1). The numbers in parentheses correspond to references at the end of the article.

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take the initiative in setting up ways for parents to demonstrate support. For example, to help parents monitor their children's study habits, you can include a space for parents' signatures on all duplicated tests and worksheets. You can keep forms on hand to notify parents of incomplete or missing homework assignments.

Notice of Incomplete/Missing Homework

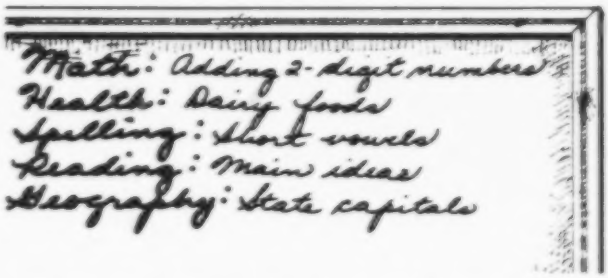
Student: _____
Date: _____
Assignment: _____
_____ Did not complete
_____ Did not turn in
Work to be turned in complete by _____ (date)

Signed: _____(student)
Signed: _____(parent)

You can encourage parents' support and involvement in other ways, too. Stress to parents the importance not only of setting aside a time for study and reading but also of designating a special place — out of the hustle and bustle of family life — for homework to be done. Urge parents to read aloud to their children and to listen to their children read. Give students assignments to read at home and include suggestions that parents can use to discuss the selection with their child. Prepare a list of books appropriate for students' level of ability and interests, and suggest that parents visit the library with their children.

Encourage parents to limit and monitor their children's television viewing. The National Assessment of Educational Progress reports that "approximately 40 percent of fourth graders, 25 percent of eighth graders, and 12 percent of eleventh graders watch at least five hours of television daily" (2). The amount of reading that students do outside of the school day is consistently related to gains in reading achievement. Time spent watching television is time not available for other activities. Students who limit their daily television viewing to less than two hours have higher reading scores than their counterparts who spend more time watching television (5). You can help parents select the television programs the family watches as a way to support what the child learns in school. Ask your students to watch certain educational, special event, or cultural programs. Suggest that parents watch the programs, too, so they can discuss them with the child.

Effective communication between the school and the home is vital to obtaining parent support. Students can play a role in keeping parents informed. Encourage students to discuss the school day with their parents. Parents often complain that children never seem to remember what they did at school. Help students remember. Devote one corner of the chalkboard to a summary of each lesson like the one shown here.



As the day progresses, complete the list and, then, during the last few minutes of the school day, review the list with students. Not only will this review reinforce the learning that has taken place. It will also keep the day's activity fresh in the students' minds.

Parents need specific information about how to help their children. Collect and share activities, such as those we describe below and in the insert, that parents and children can do together. Suggest games and group activities that are both educational and enjoyable.

ACTIVITIES FOR HELPING PARENTS HELP CHILDREN

RESEARCH HAS SHOWN THAT PARENT involvement with their children's learning can lead to increased parental support for the school. Parents who participate in schools express higher levels of satisfaction with both the school and their own children's achievement (3). You can encourage parents to help their children learn by suggesting activities they can do together.

You may want to start an activity file of suggestions for the parents of elementary school children. Here are two in reading, mathematics, and language development (home science activities are included in the insert) to start your collection. They are written for parents. Send a few home with your students and invite parents' reactions to the activities.

In Reading

• Help your child plan a dream vacation. Visit a travel agency for brochures from various vacation spots in the United States. Read the brochures with your child, and let him/her select a place to visit. Have your child trace on a map all possible routes from your city to the place selected. Have your child read the names of cities and states you will travel through, as well as other points of interest along the way. Ask your child which route is the best? The shortest? The most interesting?

• Give your child a simple recipe, like the one below. Let him/her read the ingredients and directions, check the cupboard for ingredients, make a list of needed items, and help you find the items in the grocery store. Let your child make the recipe, giving help as needed, to share with the family.

No Bake Cookies

1 12-oz.pkg. vanilla wafer crumbs
3/4 c. chopped nuts
1/4 c. melted butter
1 6 oz. can frozen orange juice
1 c. powdered sugar

Mix first 4 ingredients. Form into small balls. Roll in powdered sugar. Freeze. Makes 6 servings.

Besides giving children reading practice, following recipes introduces children to standard abbreviations and to fractions. It may also teach your child an unforgettable lesson in following directions!

In Mathematics

• In each section of an egg carton, write a number (from 1 through 12). Put two marbles inside the carton, close the lid, and have your child shake the carton. Open the lid and have your child add the numbers in the two sections where the marbles landed. Use higher numbers or have the child multiply the numbers as his/her ability and skill levels increase (2).

• Have your child keep a daily record of the time he/she goes to bed each night and of the time he/she gets up in the morning. Then give your child a piece of graph paper and ask him/her to plot the data. Did your child get the same amount of sleep each night? If not, which night did he/she get the most sleep? The least? What were the reasons for the differences? What is the average amount of sleep per night? Do the same for other family members and compare. Who gets the most sleep? The least? Why?

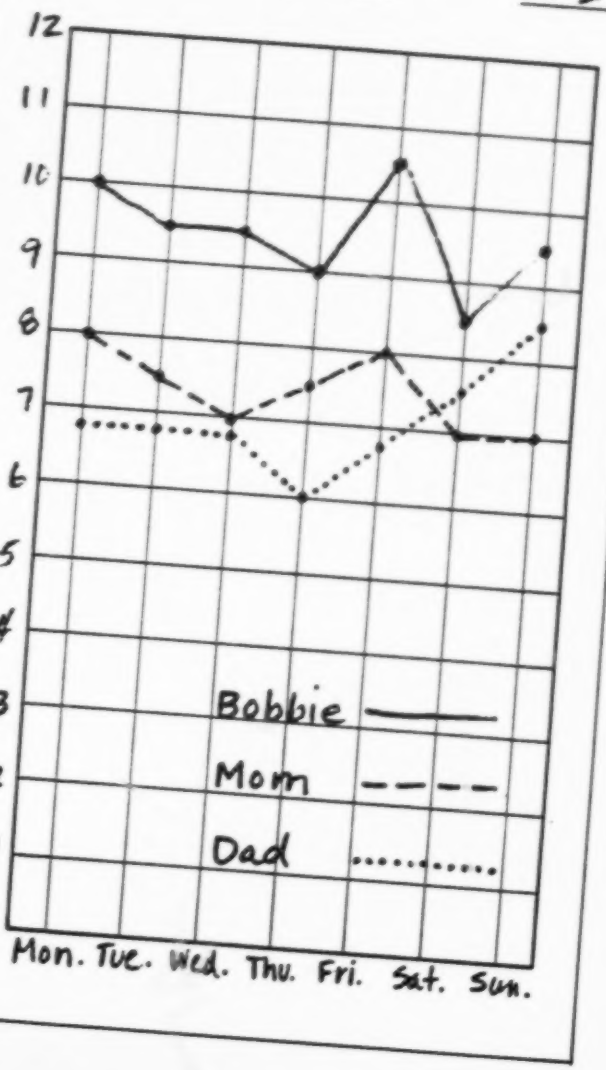
In Language Development

• Tell your child to pretend he/she is a famous person — movie star, sports or political figure, for example — and that you want to interview him/her for a magazine article. Ask your child questions about early childhood, how he/she became famous, etc. Tell your child to try to think like the famous person and answer as that person would. Write down your child's answers. Then give your child the answers and ask him/her to write a brief biography of the person using the information you recorded. You can also let your child interview you and write an article about your life.

• Give your child a stack of old magazines. Give

Bobbie's Record of Sleep

	Went to Bed		Got up	Hours Asleep
Mon.	9:30 p.m.	Tues.	7:30 a.m.	10
Tues.	10:00 p.m.	Wed.	7:30 a.m.	9½
Wed.	9:30 p.m.	Thurs.	7:00 a.m.	9½
Thurs.	10:30 p.m.	Fri.	7:30 a.m.	9
Fri.	11:00 p.m.	Sat.	9:30 a.m.	10½
Sat.	12:00 p.m.	Sun.	8:30 a.m.	8½
Sun.	9:30 p.m.	Mon.	7:00 a.m.	9½
		TOTAL:		64½
		AVERAGE:		9½



SCIENCE
At Home

From *The Paper Airplane Book* by Seymour Simon
(Viking Press, 1971).

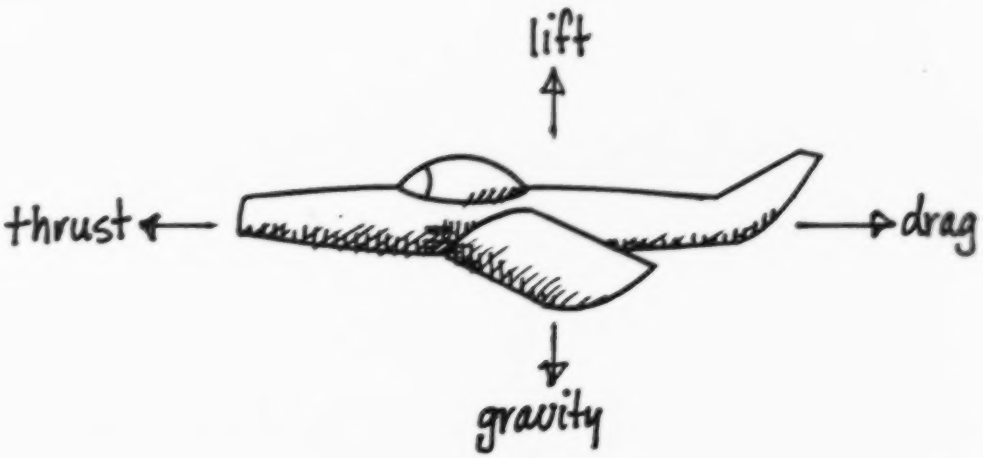
Dear Parents:

Most children enjoy making and flying paper airplanes. Even a simple paper airplane can help you teach your child important science facts.

In addition to instructions for a basic paper airplane, a brief explanation of some basic flight concepts is included. Discuss these concepts with your child as you make and fly the paper airplanes. Encourage your child to experiment with the basic designs and discuss the effects of such changes on the airplane's flight pattern.

I encourage you to take part in this activity with your child. You may wish to visit the library for books about flight. The children's librarian can help you select books that are appropriate for your child's reading level.

Sincerely,



Four forces that affect flight:

lift: upward movement of the airplane caused by air pushing against the underside of the wings; slight upward tilt of wings on real airplanes allows this force to occur.

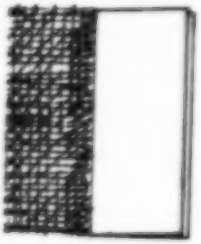
thrust: forward movement of the airplane; throwing a paper airplane provides thrust just as engines provide thrust for a real plane.

drag: slows forward movement of airplane; occurs when angle of tilt (of wings) is too great and more wing surface is presented to the air.

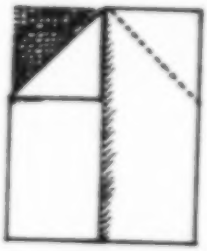
gravity: the force that pulls all objects to the surface of the earth.

Instructions

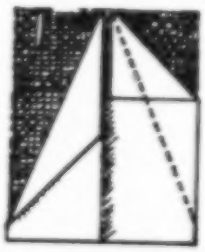
1. Fold an 8 1/2" by 11" piece of paper in half lengthwise.



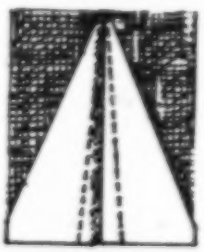
2. Open the paper and fold both corners toward center along dotted lines.



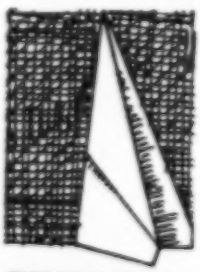
3. Fold both sides toward the center along dotted lines.



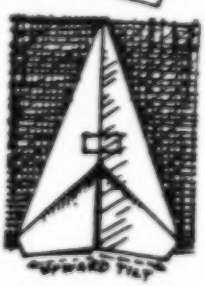
4. Turn paper over. Fold one side along the dotted line.



Open the paper and fold the other side along the other dotted line.



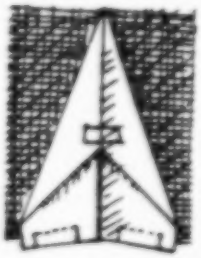
5. Put a piece of tape on top to hold the body of the plane together and to give the wings an upward tilt.



Variations

1. Add flaps.

   Make a flap by making 2 half-inch cuts (about 1 1/2" apart) on the back edge of the wings.

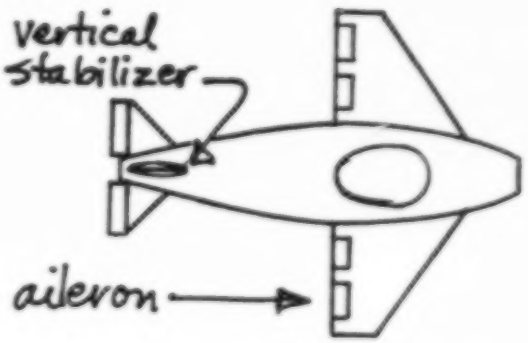


Fly the plane with the flaps bent up. What happens?

Fly the plane with the flaps bent down. What happens?

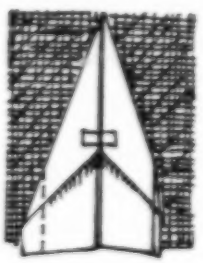
Now fly the plane with one flap bent up and one bent down. Then reverse. What happens?

The flaps on your paper airplane work in much the same way the *ailerons* work on a real plane. What do you think ailerons do?



2. Add vertical stablizers.

   Make another basic model airplane. This time fold the edges of the wings upward about an inch.



When you fly a plane with vertical stablizers, how is its flight different? What happens if you bend the stablizers downward?

3. What other changes can you make to these basic designs? What would happen if you added weight — such as paper clips — to the body of the plane? Does it matter where you place the clips?

him/her plain sheets of 8-1/2" x 11" paper on which you have written the beginning of a sentence. Tell your child to look through the magazines for a picture to finish the sentence. You may want to pick a topic, your family, for example, and keep the completed picture-sentences in a notebook. You may prefer to paste pictures from magazines on construction paper and have your child make up a story. Depending on age and ability level, have your child either tell or write the story.

SUMMARY

PARENT SUPPORT OF SCHOOL POLICIES and academic programs begins at home. Parents can read to their children, provide study time, monitor work habits, and discuss the day's activities at school with their children. Parents can also provide direct instruction, particularly in the elementary grades. When parents become involved with their children's schools, everyone benefits: Parents have more positive attitudes toward school, students show achievement gains, and teachers have an easier job as parents help students assume responsibility for completing assignments.

What can you do to strengthen the bond between a child's home and school? Communicate frequently and regularly with parents about their children. Give parents guidance for helping their children at home, including instructions for specific content area activities that parents can enjoy with their children. Your efforts will be rewarded with increased parent understanding and support of your teaching efforts. More importantly, you will be increasing the likelihood of success for your students.

The The U. S. Department of Education/National Institute of Education has published a series of brochures written for parents. The brochures offer suggestions to parents for helping their children in school. The series includes:

Help your Child Improve In Test-Taking
Help your Child Learn to Write Well
Help your Child Become a Good Reader
Help your Child Learn Math

Complete ordering information is available from the Office of Educational Research and Improvement, U.S. Department of Education, Washington, D.C. 20208.

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5. Zakariya, S. B. (1985). To boost kids' reading skills, pack away the workbooks and bring on the books. *The American School Board Journal, 172* (8), 17-20.

A NOTE ABOUT THE INSERT

The insert is designed so that you can make copies and send it home with your students. We've left space for you to sign the letter to parents.

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